

Message

From: EPAResearchCompass [EPAResearchCompass@epa.gov]
Sent: 3/15/2023 8:20:13 PM
To: ORD-ALL Feds and NonFeds and RSLs [ORD-ALL_Feds_and_NonFeds_and_RSLs@epa.gov]
CC: Clarage, Meredith (she/her/hers) [Clarage.Meredith@epa.gov]; Fan, Shirley (she/her/hers) [fan.shirley@epa.gov]; Crk, Tanja [Crk.Tanja@epa.gov]; Scalise, Laura [Scalise.Laura@epa.gov]; MaGowan, Maricruz [MaGowan.Maricruz@epa.gov]; Schupp, George (he/him/his) [schupp.george@epa.gov]; Persoon, Carolyn [persoon.carolyn@epa.gov]; Batka, Sheila [Batka.Sheila@epa.gov]; Spence, Sandra (she/her/hers) [Spence.Sandra@epa.gov]; Peffers, Mel (she/her/hers) [Peffers.Mel@epa.gov]; Blevins, John (he/him/his) [Blevins.John@epa.gov]; Bourbon, John [bourbon.john@epa.gov]; Campbell, Dave [campbell.dave@epa.gov]; Caporale, Cynthia (she/her/hers) [Caporale.Cynthia@epa.gov]; Deabay, Elizabeth (she/her/hers) [Deabay.Beth@epa.gov]; Hunter, Johanna [Hunter.Johanna@epa.gov]; James, Duane [James.Duane@epa.gov]; Jay, Michael [Jay.Michael@epa.gov]; Johnson, Hunter [Johnson.Hunter@epa.gov]; McQuiddy, David [Mcquiddy.David@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Schupp, George (he/him/his) [schupp.george@epa.gov]; Szerlog, Michael (he/him/his) [Szerlog.Michael@epa.gov]; Tapia, Cecilia [Tapia.Cecilia@epa.gov]; Williamson, Anahita [Williamson.Anahita@epa.gov]; Johansen, Amy [Johansen.Amy@epa.gov]; Liljegren, Jennifer [Liljegren.Jennifer@epa.gov]; McCabe, Janet [McCabe.Janet@epa.gov]; Monger, Jon [Monger.Jon@epa.gov]; Gorostiza, Sylvia [Gorostiza.Sylvia@epa.gov]; Gibson, Neshawne [Gibson.Neshawne@epa.gov]; Pepich, Barry [Pepich.Barry@epa.gov]; Dodo, Gerald [Dodo.Gerald@epa.gov]; Islam, Mahbubul (he/him/his) [Islam.Mahbubul@epa.gov]; Brown, DonaldM [Brown.DonaldM@epa.gov]; McFadden, Kelly [McFadden.Kelly@epa.gov]; Matthews, Demond [matthews.demond@epa.gov]; Brooks, Lisette [Brooks.Lisette@epa.gov]
Subject: Weekly Compass: March 15, 2023



Weekly Update: 3/15/2023

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the Weekly Compass archive on ORD@work.

Weekly Note from Chris Frey

Team ORD- We are already halfway through March and it feels like it has flown by. But then I look at all we are doing, and think, "There is so much to show for this first quarter of 2023!" And this week is no exception – see below!

This week, CPHEA launched our new Integrated Climate Sciences Division (ICSD). The new division will advance two climate-focused initiatives and address urgent climate priorities. The division's Interdisciplinary Climate Assessment Program (ICAP) will deliver quantitative assessments of climate damages and the benefits of national, state, and local actions to control greenhouse gases. And, its Regional Climate Assistance Network (RCAN) will deliver regionally relevant assessments, technical assistance, and capacity building in frontline communities most vulnerable to climate change impacts. The ICSD will address urgent climate priorities expressed by EPA program, regional, state, and Tribal partners and facilitate critical interactions between researchers and stakeholders in support of EPA's climate and EJ priorities. Thanks everyone for their contributions to bringing this division from concept to reality!

And yesterday, EPA announced a proposed rule that would establish legally enforceable levels for six PFAS known to occur in drinking water. If finalized, the rule will regulate PFOA and PFOS as individual contaminants, and will regulate four other PFAS (PFNA, PFHxS, PFBS, and GenX) as a mixture. This is an incredibly important action to protect people from the risk of negative health effects associated with these PFAS, and I'm so proud of the role ORD scientists and regulatory support staff played in laying the scientific groundwork and in supporting OW to take the first step with this precedent-setting action. ORD scientists supported the derivation of maximum contaminant level goals (MCLGs) for PFOA and PFOS, conducted toxicity testing of PFOA/PFOS mixtures, co-led the development of the mixtures framework for regulating additional PFAS, and modeled the performance and cost of treatment for a range of scenarios considered by EPA. To everyone who worked on this issue in any capacity, thank you.

With that I will end the note with another quote and book recommendation in tribute to Women's History Month.

"What you do makes a difference, and you have to decide what kind of difference you want to make." — Jane Goodall, Primatologist and Anthropologist

Book recommendation: Lab Girl, by Hope Jahren.

I look forward to reporting on more ORD accomplishments! -Chris

Quick Updates

- EPA employees are encouraged to complete the [Moving from Bias to Inclusion training course](#) and other Diversity, Equity, Inclusion, and Accessibility (DEIA)-related courses available in FedTalent.
- Digital Accessibility Weekly Meetings: Weekly meetings will be held every Tuesday from 3 – 4 p.m. EST. To view all recordings and view the [full schedule](#) of specific topics being covered in these sessions please join the [Digital Accessibility team](#).
- Deputy Administrator McCabe sent out a [note](#) about the close of the 2022 CFC campaign - Here at EPA, we collectively raised over \$1.26 million to help those in need here in our local communities, communities across our nation, and around our world. Way to go EPA!
- Impressed with something a colleague did? Check out the [latest updates to the EPA Shooting Stars Recognition Program](#) shared by Office of Mission Support Principal Deputy Assistant Administrator Kimberly Patrick and give that person a Shooting Star!
- The Office of Mission Support has automated the name change process. If you need to initiate a name change request, please see the EPA [User's Guide for Name Change Requests](#) for more details.

- Deputy Administrator McCabe provided an update to [Agency COVID protocols](#)
- Upcoming Webinars
 - 3/15 3pm ET: [EPA Tools & Resources Webinar: Wildland Fire Research to Protect Health and the Environment](#)
 - 3/15 3pm ET: [R user group monthly webinar](#)
 - 3/21 3pm ET: [Adding Titles, Language Definition, and Bookmarks to PDFs](#)
 - 3/28 3pm ET: [Fixing Alternative Text in PDFs](#)

Photos of the Week: Cumulative Impact Assessment Research and Regulatory Activities at EPA Panel

In the Lab:

Society of Toxicology (SOT) 2023 Annual Meeting (March 19-23)

EPA will have a strong presence at SOT 2023 in Nashville, TN with more than 50 panels and platform presentations and over 100 poster presentations. Visit the [EPA SOT 2023 Event Page](#) for the schedule of EPA SOT booth activities, like live Tool Demos and Meet the Directors Sessions, and a downloadable list of ORD presentations, posters, and chaired sessions throughout the meeting. For EPA devices, this [internal list](#) has the same information as the external downloadable file and can be searched and filtered in various ways.

If you are attending, stop by the EPA sponsored booth #1203 for the Meet the Directors sessions, EPA tools demos, to meet your colleagues or just to say "hi!" Encourage your staff to stop by as well.

Many thanks to CCTE's Outreach, Stakeholder Engagement, Training and Communications Team for pulling this list and website together as well as planning for the EPA exhibit booth. If you see discrepancies, please contact Jessica Daniel to update it.

CCTE Producing Tool Tips Videos for NAMs Training Program

As part of the NAMs Training Program, CCTE is producing short instructional videos on tool features. These Tool Tips videos offer a dynamic user guide for various EPA tools like ECOTOX and GenRA. The first two CompTox Chemicals Dashboard Tool Tips are now live and can be viewed on the [NAMs Training Tool Tips page](#).

CCTE Scientists Contribute to Paper about Endocrine Activity Toolbox

CCTE's Sara Vliet and Carlie LaLone contributed to a paper in Environmental Toxicology and Chemistry titled "[New Approach Methodologies for the Endocrine Activity Toolbox: Environmental Assessment for Fish and Amphibians](#)." Multiple *in vivo* test guidelines focusing on the estrogen, androgen, thyroid, and steroidogenesis pathways have been developed and validated for mammals, amphibians, or fish. However, these tests are resource intensive and often use a large number of laboratory animals. New approach methodologies (NAMs) hold great promise to identify molecular, cellular, and tissue changes that can be used to predict effects reliably and more efficiently at the individual-level (and potentially on populations) while reducing the number of animals used in (eco)toxicological testing for endocrine disruption.

2023 Interstate Technology and Regulatory Council (ITRC) Annual Meeting

The [2023 Interstate Technology and Regulatory Council \(ITRC\) Annual Meeting](#) is taking place March 20-23 in Boston, Massachusetts. This annual meeting brings together environmental leaders and professionals from state agencies; Tribes; EPA, DOE, DOD and other federal agencies; industry; and NGOs to work together in the development of consensus-based environmental guidance documents and training courses for state environmental agencies and others. Over 15 representatives from ORD will participate in working group meetings for ITRC

technical teams. Lisa Matthews will present on ERIS/State and EPA environmental research priorities at the ITRC State Engagement POCs meeting and participate in the ITRC Board of Advisors meeting including a discussion on priority topics important for ITRC to focus on in the future.

CEMM Scientist to Play Leading Role for Pandora Global Network

CEMM's Eric Baumann will now serve as the lead for weekly meetings of Pandora instrument operators in the Pandora Global Network (PGN), as well as provide network operations training to NASA staff. The PGN is a worldwide network of ground-based sun spectrometers facilitated by organizations such as EPA, NASA, the European Space Agency (ESA) and others, which serve to validate and standardize satellite measurements of tropospheric reactive trace gases such as nitrogen dioxide, ozone, sulfur dioxide, and formaldehyde. The participating organizations agree that network operators serve the most important role within the network, thus the requests for Baumann's expertise serve as an acknowledgement of his and CEMM's contributions to the program. Baumann's leadership and stamp on PGN operations gives EPA the opportunity to improve and better understand PGN data quality.

CEMM-Authored Paper Highlighted as Publication of the Month in Science Inventory

CEMM's Elizabeth George, Yongshan Wan, and Karen Bradham's work *Ingestion of remediated lead-contaminated soils affects the fecal microbiome of mice* was selected as Science Inventory's featured publication for March 2023. Their paper explores the relationship between the murine fecal microbiome and ingested lead contaminated soils treated with different remediation options designed to reduce bioavailability. The study suggested that commonalities in the microbiome that are correlated with more positive health outcomes may serve as biomarkers to assist in the selection of remediation approaches that are more effective and pose less risk.

Response Support Corps Deployment—East Palestine Train Derailment

CESER's Sarah Watson is deploying, in-person, to the East Palestine Train Derailment site in eastern Ohio as a part of the EPA's Response Support Corps (RSC). The RSC is the Agency's standing resource of EPA volunteers who provide critical support to the Agency during an EPA emergency response. Watson will be working on the Public Information Officer team as a Communications Writer.

Continuing Pb Work with Coeur d'Alene Tribal Wetlands Tundra Swans at Bunker Hill Superfund Site

This week, CESER's Todd Luxton, Jenny Goetz, Matt Noerpel, Geoff Millard, and Anna Wade will travel to the Bunker Hill superfund site to sample swans and the wetlands in the Lower Basin and within Coeur d'Alene Tribal wetlands. Trained staff from EPA, the Coeur d'Alene Tribe, IDFG, and USFWS will conduct this work, and release the swans unharmed. Wetlands are chosen for a range of lead contamination present, from clean to high levels. The team will safely capture swans during the day through swim-in traps or rocket nets, collect blood and fecal samples, and measure their leg bones for lead. Next, the team will place marking devices, such as colored neck collars, leg bands, or satellite collars. These devices will provide a better understanding of how swans use the Lower Basin and wider flyway on their migration throughout the year. In addition to biological samples, EPA will be collecting sediment and vegetation samples within the lower basin in locations where tundra swans feeding and loafing (Loafing - birds exhibiting relaxed behavior not related to reproduction or survival) and in locations that represent habitat and vegetation that would be fed upon. The data collected will help improve our understanding of how sediment lead concentration is related to fecal and blood lead levels. Results from this work will influence the remediation plan for Bunker Hill and the surrounding watershed.

HSMMD Collaborating with the US Army Corps of Engineers

This week, CESER's Jeff Szabo, Josh Steenbock, and Jim Goodrich will collaborate with the US Army Corps of Engineers (USACE), Engineer Research and Development Center near Vicksburg,

MS. They will conduct a variety of studies evaluating the best treatment trains to decontaminate dam and levee relief wells. There are tens of thousands of relief wells located along the levees and dams in the United States designed to relieve water pressure on those structures. These wells become encrusted with corrosion and biofilms reducing their production and ability to reduce pressures, thus putting the network of dams and levees at risk for failure. The USACE currently treats each well every 3-5 years with the goal of reducing the time between treatments. The Water-On-Wheels (WOW Cart) Emergency Water Treatment System has been incorporated by the USACE to improve the rehabilitation of the wells and increase the number of wells that can be treated in a day. In addition to the performance of the treatment system, the cost, ease of operation/speed, and integration with other unit processes is being investigated along the Mississippi River levee, north of Vicksburg, MS. The goal is to treat 20 wells/day.

CESER Supports Region 6 – Air Force Plant 4 Superfund Site Remediation

Next week, CESER's Terry Burton will travel to the [Air Force Plant 4 Superfund site](#) in Fort Worth, Texas. The Department of Defense (DoD) will brief Texas state officials and Region 6 EPA staff on site activities over the past 6 months. DoD will also conduct a site walkthrough to highlight several important areas. Aircraft have been manufactured on the 726-acre site since 1942, and currently the site is the location for F-35 aircraft production. Decades of manufacturing operations have left behind waste oils, fuels, paint residues, solvents, and process chemicals. Air Force technical staff are proposing to modify the current remedy at selected locations, and discussions of those proposals will also be part of the site visit.

HSRP Research Featured in The Microbiologist

New HSRP research was featured in The Microbiologist magazine article: [New sampling tech will help bioterrorism responders to trace anthrax contamination](#). The story provides an overview of the recently published study, [Impact of filter material and holding time on spore sampling efficiency in water](#), which was published in *Letters in Applied Microbiology*. This work evaluated different filter media that is commonly used in environmental DNA (eDNA) sampling, which is an emerging field of non-invasive sampling technologies for detecting the presence of different species. The techniques used in eDNA sampling offer potential benefits over traditional sampling methods, including reducing costs and logistical challenges during sample transport and analysis. Results from the research indicate that these new technologies could be leveraged for characterizing the contamination levels and extent of bacterial spores in water following a wide-area contamination incident.

CPHEA and CESER Researchers Participating in Chemical Warfare Agent Preparedness Training

On March 27-31, CESER's John Archer, Timothy Boe, Paul Lemieux, and Lukas Oudejans, along with CPHEA's Emily Snyder, will participate in and instruct a training course primarily for EPA on-scene coordinators (OSCs) which focuses on how EPA would respond to a chemical warfare agent (CWA) incident. Representatives from other government agencies, including the FBI, DoD, and National Guard Civil Support Teams (CSTs) will also participate in the training. This training is organized by EPA's CBRN Consequence Management Advisory Team (CMAT) from OLEM/OEM. CPHEA and CESER researchers will work with EPA's special teams to inform and train students on ORD homeland security research program topics including the use of Provisional Advisory Levels (PALs), sampling methods, decontamination technologies, waste management, novel personnel decon line approaches, CWA case studies, decision making tools, and data management. EPA OSCs will benefit from this training through in person interaction with trainers from CMAD, CESER, CPHEA, and ERT. It will strengthen their capability to respond to a CWA incident. CPHEA and CESER researchers will benefit from this training by gaining operational awareness of EPA's emergency response enterprise and face-to-face networking with a key group of our regional, program office, and interagency partners.

IRIS Updates

1. As early as next week, the IRIS Program will publish a final report. "A systematic Evidence Map for Polychlorinated Biphenyl (PCB) Mixtures: Evaluation of Noncancer Health Endpoints and Exposures." This report is a supporting product for the IRIS PCB assessment currently in development.
2. As early as next week, the IRIS Program will publish a FRN and Draft IRIS Assessment for PFDA for a 60-day public comment period. This is Step 4a of the IRIS process.
3. As early as next week, the IRIS Program will publish a FRN and Protocol for Naphthalene for a 30-day public comment period. This is part of Step 1 of the IRIS process.

New EPA Report on Research Needs for Novel Engineered Microbes & Biopesticides

A report is now available in ORD's Science Inventory from a July 2021 workshop where CPHEA's Jay Reichman worked with OCSPP and external partners to identify priorities regarding manufactured products being released into the environment. [This report](#), generated from data gathered at the workshop, outlines research priorities relevant to OCSPP TSCA and FIFRA/FFDCA risk assessments to assist in developing future ORD research strategies.

Transforming EPA Science to Meet Today's and Tomorrow's Challenges

Last week, the National Academies of Sciences, Engineering, and Medicine (NASEM) published a consensus report commissioned by ORD on "Transforming EPA Science to Meet Today's and Tomorrow's Challenges". The report identifies emerging scientific and technological advances from across a range of disciplines that ORD should consider and recommends how ORD can position itself to best anticipate and take advantage of emerging scientific advances to meet current and future challenges. The committee provides recommendations to ORD focused on incorporating systems-thinking approaches, enhancing strategic research planning, integrating innovation, and strengthening collaboration and communication. It also identifies specific emerging scientific tools and methods on which ORD should focus and suggests enhancements to leadership, workforce, and strategic resources that will enable ORD to utilize emerging scientific advances. The full report and a highlight sheet [can be found here](#).

In the Office:

Accessibility Angle: Adding Titles (Document Properties), Language Definition, and Bookmarks to PDF

PDFs are known for being challenging to make accessible; but every remediation step taken is a step towards compliance.

Document Properties (Metadata)

The Title, Subject, and Author fields in the document properties must be properly populated. These document properties are also referred to as metadata. Metadata should provide succinct, descriptive information of a PDF document. Metadata is used to describe the document it lives on. Having metadata can influence and improve search results, as well as give you greater control over your content. Reference the agency guidance on [Metadata for PDF Documents](#) for specific formatting rules.

Document Language

Specifying the document language in a PDF enables some screen readers to switch the current speech synthesizer to the appropriate language, allowing correct pronunciation of content in different languages.

Bookmarks

Bookmarks make it possible for users to locate content in long documents. A person with cognitive disabilities may prefer a hierarchical outline that provides an overview of the document rather than reading and traversing through many pages. This is also a conventional means of navigating a document that benefits all users.

Documents that have at least 10 pages should have bookmarks for the major divisions of the document. It is recommended that you create bookmarks based on the heading structure or Table of Contents if one exists.

Join the Digital Accessibility Working Group (DAWG) on Tues, 3/21 at 3pm ET as we discuss [Adding Titles \(Document Properties\), Language Definition, and Bookmarks to PDFs.](#)

Earth Day Social

Get ready to shine - we want to see you in your favorite nature space and hear why it's special for you. We'll be kicking off an Earth Week campaign for social media featuring snapshots (could be a selfie, family, or pets) in your favorite place.

For those of you that aren't a fan of selfies- no worries! You can submit an image of just the place you find glorious. More details on how to submit will be in next week's Research Compass. Until then – say cheese!

Also for the poets among us – Region 6 is leading the Earth Day Haiku effort on social media and we would love to have ORD's creativity reflected. More details to come next week!

New WiFi Access Points Being Installed Across ORD

The Office of Mission Support will soon install new WiFi access points across ORD. The existing WiFi devices are at end of life. The new models will provide better coverage and have better performance. After the install, the new WiFi will be able to:

- Increase coverage to areas that previously may have had issues.
- Have a better and stronger signal.

There will be minimal impact to users as the wireless access points are changed out individually. Eventually, there will be one mass outage when the controller is swapped out but that will be scheduled during off-peak hours to minimize the impact to users. The controller is a network appliance that the wireless access points are managed through.

Please reach out to Jon Richardson if you have any questions or concerns.

The Seeking Diversity in Everything We Do Initiative is now the IDEAS Initiative!

The recent Leadership for Inclusion (L4I) survey identified "seeking diversity in everything we do" as a high-priority area of improvement for our organization. As a direct result, ORD has started an initiative to "seek diversity in everything we do." Marty Chintala, our Change Sponsor, and our Strategy and Coordination Teams have given this effort a new name- we will now be referring to it as the *Inclusion, Diversity, Equity, and Accessibility in Science Initiative* or *IDEAS Initiative*. We feel that the IDEAS Initiative represents our forward-looking and aspirational effort to engage everyone in making ORD the most inclusive and best place to work in the Agency! Be on the lookout for more to come about how you can be a part of the IDEAS Initiative! Please feel free to reach out to Marty with any thoughts or questions at chintala.marty@epa.gov.

Accolades:

Boyce Award of NTSS Distinguished Neurotoxicologist

CPHEA's Will Boyce is receiving the *Distinguished Neurotoxicologist Award* at the upcoming Society of Toxicology meeting in Nashville, TN. This award recognizes those who have made important high-impact scientific, regulatory, or service contributions to their field.

In the Community:

CEMM-ACESD Participates in Rhode Island Science and Engineering Fair

On Saturday, CEMM-ACESD scientists and staff will participate as judges for the Rhode Island Science and Engineering Fair. This event will be held at the Community College of Rhode Island and will be a statewide display of science fair projects from hundreds of Rhode Island students in grades 6-12. Projects will be focused on different disciplines, including chemistry, cell biology, environmental science, environmental engineering, robotics, and more.

EPA-RTP Community Engagement & STEM Education (CE-STEM) Program

1. On Monday, EPA's Weekly EPA Seminar Series with N.C. A&T University's Atmospheric Sciences Department in Greensboro, N.C. featured OAQPS's Barron Henderson who presented "Estimating Particulate Matter using Geostationary Satellites for AirNow" to faculty and students. CE-STEM leads the series as part of our Diversity, Equity, Inclusion, Accessibility (DEIA) efforts.
2. On Saturday, CE-STEM volunteers will participate in the City of Cary Arbor Day Festival tabling event. Volunteers will promote EPA's mission to protect human health and the environment through community interactions and hands-on activities.
3. Next week, CE-STEM's AJ Blackburn will lead a monthly, interactive STEM activity for K-5 students at Holt and Easley Elementary Schools in Durham, N.C. Students will engage with an interactive activity titled "Bat Chats: Underrated Pollinators." In this activity, students will learn how safeguarding crucial ecosystem services can protect human health and the environment.
4. Next week, CEMM's Rohit Mathur will present "CMAQ Modeling System and its Applications" as part of EPA's Weekly EPA Seminar Series with N.C. A&T University's Atmospheric Sciences Department in Greensboro, N.C. CE-STEM leads the series as part of our Diversity, Equity, Inclusion, Accessibility (DEIA) efforts.
5. Next week, CE-STEM's AJ Blackburn will lead two sessions of EPA's Watts Up with Energy activity for elementary school students at Orange County Parks and Recreation Department in Hillsborough, N.C. Students will measure electricity consumption of household appliances with watts meters and learn about energy conservation and efficiency. Students will also learn where electricity comes from and the difference between renewable and non-renewable energy resources.
6. Next week, CE-STEM volunteers AJ Blackburn and Kelly Witter will lead five sessions of "Connecting Human Health and Ecosystems" at Durham Public School's Hub Farm to teach students from Lakewood Montessori Middle School about ecosystems, the services they provide, and how they impact human health.
7. Next week, CE-STEM will host high school students from Southern School of Energy & Sustainability in Durham, N.C. on the EPA Campus for an all-day field trip celebrating Women's History Month. Students will participate in a sustainable building tour and make in-person connections with female EPA scientists during a Career Conversation session. The field trip will have hands-on activities including: The Game of Energy Choices, Introduction to Benefits of Ecosystems & EcoHealth Activity, an Electric Vehicle demonstration, and an Environmental Justice and Greenway Case Study. The goal of this visit will be to inspire students to pursue future careers that align with EPA's mission of protecting human health and the environment.
8. Next week, CE-STEM volunteers Antonio Leathers and Scarlett VanDyke will participate in Merrick Moore Elementary School's Career Day. Volunteers will lead four 20-minute interactive sessions for K-5 students about their careers at EPA and how they work to support EPA's mission to protect human health and the environment.

Photos of the Week: Cumulative Impact Assessment Research and Regulatory Activities at EPA Panel

Last week, Chris Frey moderated a panel at the National Environmental Justice Conference (NEJC) on actions to address cumulative impacts at EPA. The panel participants were (from left to right):

- Sarah Mazur (SHC PANPD)
- Ann Wolverton (Office of Policy, National Center for Environmental Economics)
- Charles Lee (Office of Environmental Justice and External Civil Rights)
- Helen Serassio (Office of General Council)
- Alan Walts (Region 5)

